

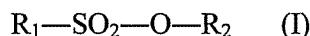
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

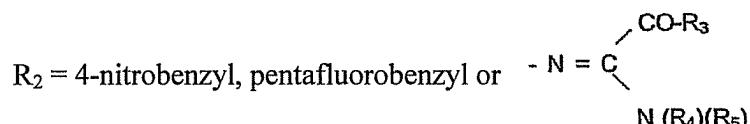
Listing of Claims

Claim 1 (Currently Amended): A composition for producing amino resin products by melt processing, said composition comprising:

- A) from 95 to 99.9% by mass of solvent-free meltable polycondensates of melamine resins having molar masses of 300 to 300 000, the melamine resin polycondensates being mixtures of meltable 4- to 1000- nucleus polytriazine ethers,
- B) from 0.1 to 5% by mass of weak acids as thermoinducible curing agents, composed of
- B1) acid formers of the type of blocked sulphonic acid of the general formula (I)



R_1 = unsubstituted or substituted aryl or biphenyl



substituents

where

R_3 = non-substituted or substituted alkyl or aryl,

R_4 = H, C₁-C₁₂-alkyl, phenyl, C₂-C₉-alkanoyl or benzyl,

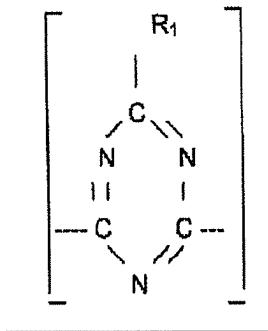
R_5 = H, C₁-C₁₂-alkyl or cyclohexyl,

or R_3 and R_4 or R_5 together with the atoms to which they are attached form a 5- to 8-membered ring which can be fused by 1 or 2 benzo radicals,

- B2) C₄-C₁₈ aliphatic and/or C₇-C₁₈ aromatic carboxylic acids,
- B3) alkali metal salts or ammonium salts of phosphoric acid,
- B4) C₁-C₁₂-alkyl esters or C₂-C₈-hydroxyalkyl esters of C₇-C₁₄ aromatic carboxylic acids or inorganic acids,
- B5) salts of melamine or guanamines with C₁₋₁₈ aliphatic carboxylic acids,

- B6) anhydrides, monoesters or monoamides of C₄-C₂₀ dicarboxylic acids,
- B7) monoesters or monoamides of copolymers of ethylenically unsaturated C₄-C₂₀ dicarboxylic anhydrides and ethylenically unsaturated monomers of the type of C₂-C₂₀ olefins and/or C₈-C₂₀ vinyl aromatics, and/or
- B8) salts of C₁-C₁₂-alkylamines and/or alkanolamines with C₁-C₁₈ aliphatic, C₇-C₁₄ aromatic or alkylaromatic carboxylic acids and also inorganic acids of the type of hydrochloric acid, sulphuric acid or phosphoric acid, and
- C) if desired, up to 400% by mass of fillers and/or reinforcing fibres, up to 30% by mass of other reactive polymers of the ethylene copolymer, maleic anhydride copolymer, modified maleic anhydride copolymer, poly(meth)acrylate, polyamide, polyester and/or polyurethane type, and up to 4% by mass, based in each case on the melamine resin polycondensates, of stabilizers, UV absorbers and/or auxiliaries

wherein in the polytriazine ethers the triazine segments



R₁ = -NH₂, -NH-CHR₂-O-R₃, -NH-CHR₂-O-R₄-OH, -CH₃, -C₃H₇, -C₆H₅, -OH, phthalimido-, succinimido-, -NH-CO-C₅-C₁₈-alkyl, -NH-C₅-C₁₈-alkylene-OH, -NH-CHR₂-O-C₅-C₁₈-alkylene-NH₂, -NH-C₅-C₁₈-alkylene-NH₂, -NH-CHR₂-O-R₄-O-CHR₂-NH-, -NH-CHR₂-NH-, -NH-CHR₂-O-C₅-C₁₈-alkylene-NH-, -NH-C₅-C₁₈-alkylene-NH-, -NH-CHR₂-O-CHR₂-NH-,

R₂ = H, C₁-C₇-alkyl;

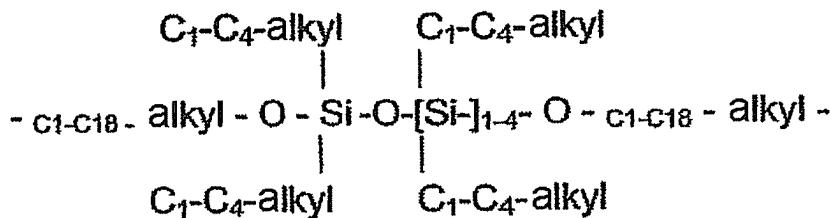
Application No. 10/517,962
Paper Dated: March 2, 2009
In Reply to USPTO Correspondence of December 3, 2008
Attorney Docket No. 4385-045828

R₃ = C₁-C₁₈-alkyl;

R₄ = C₂-C₁₈-alkylene, -CH(CH₃)-CH₂-O-C₂-C₁₂-alkylene-O-CH₂CH(CH₃)-,
-CH(CH₃)-CH₂-O-C₂C₁₂-arylene-O-CH₂CH(CH₃)-, -[CH₂-CH₂-O-CH₂-CH₂]_n-,
-[CH₂-CH(CH₃)-O-CH₂-CH(CH₃)]_n-, -[-O-CH₂-CH₂-CH₂-CH₂]_n-,
-[(CH₂)₂₋₈-O-CO-C₆-C₁₄-arylene-CO-O-(CH₂)₂₋₈]_n-,
-[(CH₂)₂₋₈-O-CO-C₂-C₁₂-alkylene-CO-O-(CH₂)₂₋₈]_n-

where n = 1 to 200;

- sequences containing siloxane groups, of the type

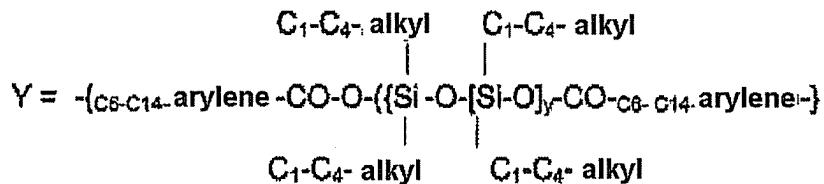


- polyester sequences containing siloxane groups, of the type

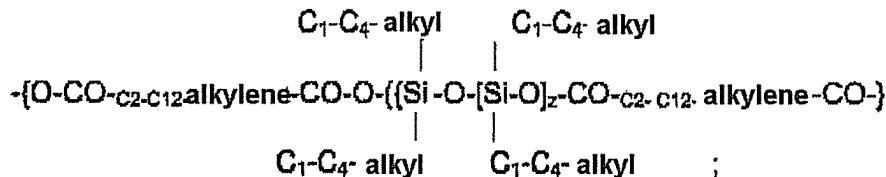
-[(X)_r-O-CO-(Y)_s-CO-O-(X)_r]-,

in which

X = {(CH₂)₂₋₈-O-CO-C₆-C₁₄-arylene-CO-O-(CH₂)₂₋₈-} or
-{(CH₂)₂₋₈-O-CO-C₂-C₁₂-alkylene-CO-O-(CH₂)₂₋₈-};

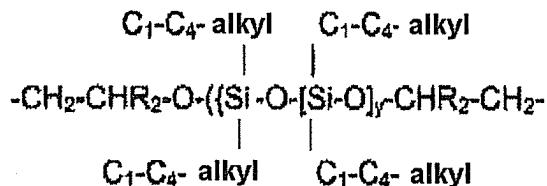


or



r = 1 to 70; s = 1 to 70 and y = 3 to 50;

- polyether sequences containing siloxane groups, of the type



where $\text{R}_2 = \text{H}$; $\text{C}_1\text{-C}_4\text{-alkyl}$ and $y = 3$ to 50 ;

- sequences based on alkylene oxide adducts of melamine, of the type of 2-amino-4,6-di-C₂C₄-alkyleneamino-1,3,5-triazine sequences;
- phenol ether sequences based on dihydric phenols and C₂-C₈ diols, of the type of

-C₂C₈-alkylene-O-C₆C₁₈-arylene-O-C₂C₈-alkylene- sequences;

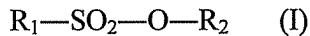
are linked by bridge members -NH-CHR₂-NH- or -NH-CHR₂-O-R₄-O-CHR₂-NH- and -NH-CHR₂-NH- and also, where appropriate, -NH-CHR₂-O-CHR₂-NH-, -NH-CHR₂-O-C₅-C₁₈-alkylene-NH- and/or -NH-C₅-C₁₈-alkylene-NH- to form 4- to 1 000-nucleus polytriazine ethers with a linear and/or branched structure,

in the polytriazine ethers the molar ratio of the substituents R₃:R₄ = 20:1 to 1:20, the proportion of the linkages of the triazine segments through bridge members -NH-CHR₃-O-R₄-O-CHR₃-NH- being from 5 to 95 mol%, and it being possible for the polytriazine ethers to contain up to 20% by mass of diols of the type HO-R₄-OH.

Claim 2 (Cancelled).

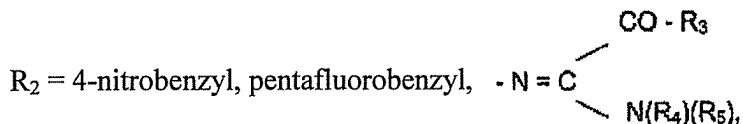
Claim 3 (Previously Presented): The composition according to claim 1, wherein the melamine resin polycondensates are mixtures of melttable 4- to 300-nucleus polytriazine ethers.

Claim 4 (Previously Presented): The composition according to claim 1, wherein the thermoinducible curing agents of the type of blocked sulphonic acid of the general formula



are blocked sulphonic acids in which the substituents

R_1 = unsubstituted or singly or multiply halogen-, C₁-C₄-haloalkyl-, C₁-C₁₆-alkyl-, C₁-C₄-alkoxy-, C₁-C₄-alkyl-CO-NH-, phenyl-CO-NH-, benzoyl- and/or nitro-substituted C₆-C₁₀-aryl or C₇-C₁₂-arylalkyl,



R_3 = C₁-C₁₂-alkyl, C₁-C₄-haloalkyl, C₂-C₆-alkenyl, C₅-C₁₂-cycloalkyl, unsubstituted or singly or multiply halogen-, C₁-C₄-haloalkyl-, C₁-C₁₆-alkyl-, C₁-C₄-alkoxy-, C₁-C₄-alkyl-CO-NH-, phenyl-CO-NH-, benzoyl- or nitro-substituted C₆-C₁₀-aryl and/or C₇-C₁₂-arylalkyl, C₁-C₈-alkoxy, C₅-C₈-cycloalkoxy, phenoxy or H₂N-CO-NH-, -CN, C₂-C₅-alkyloyl, benzoyl, C₂-C₅-alkoxycarbonyl, phenoxy carbonyl, morpholino-, piperidino-, C₁-C₁₂-alkyl, C₁-C₄-haloalkyl, C₂-C₆-alkenyl, C₅-C₁₂-cycloalkyl, unsubstituted or singly or multiply halogen-, C₁-C₄-haloalkyl-, C₁-C₁₆-alkyl-, C₁-C₄-alkoxy-, C₁-C₄-alkyl-CO-NH-, phenyl-CO-NH-, benzoyl- and/or nitro-substituted C₆-C₁₀-aryl, C₇-C₁₂-arylalkyl, C₁-C₈-alkoxy, C₅-C₈-cycloalkoxy-, phenoxy-, or H₂N-CO-NH-,

R_4 = H, C₁-C₁₂-alkyl, phenyl, C₂-C₉-alkanoyl or benzyl

or R₃ and R₄ or R₅ together with the atoms to which they are attached form a 5- to 8-membered ring which can be fused by 1 or 2 benzo radicals.

Claim 5 (Previously Presented): The composition according to claim 1, wherein the C₁-C₁₂-alkyl esters and/or C₂-C₈-hydroxyalkyl esters of C₇-C₁₄ aromatic carboxylic acids are dibutyl phthalate, phthalic acid diglycol esters and/or trimellitic acid glycol esters.

Claim 6 (Previously Presented): The composition according to claim 1, wherein the salts of melamine and/or guanamines with C₁-C₁₈ aliphatic carboxylic acids are melamine formate, melamine citrate, melamine maleate, melamine fumarate and/or acetoguanamine butyrate.

Claim 7 (Previously Presented): The composition according to claim 1, wherein the anhydrides, monoesters or monoamides of C₄-C₂₀ dicarboxylic acids are maleic anhydride, succinic anhydride, phthalic anhydride, mono-C₁-C₁₈-alkyl maleates, maleic monoamide or maleic mono-C₁-C₁₈-alkylamides.

Claim 8 (Previously Presented): The composition according to claim 1, wherein the monoesters or monoamides of copolymers of ethylenically unsaturated C₄-C₂₀ dicarboxylic anhydrides and ethylenically unsaturated monomers of the type of C₂-C₂₀ olefins and/or C₈-C₂₀ vinyl aromatics are monoesters or monoamides of copolymers of maleic anhydride and C₃-C₈ α-olefins of the isobutene, diisobutene and/or 4-methylpentene and/or styrene type with a maleic anhydride/C₃-C₈ α-olefin and/or styrene and/or corresponding monomer mixtures molar ratio of 1:1 to 1:5.

Claim 9 (Previously Presented): The composition according to claim 1, wherein the salts of C₁-C₁₂-alkylamines and/or alkanolamines with C₁-C₁₈ aliphatic, C₇-C₁₄ aromatic and/or alkylaromatic carboxylic acids or inorganic acids of the hydrochloric acid,

sulphuric acid or phosphoric acid type are ethanolammonium chloride, triethylammonium maleate, diethanolammonium phosphate and/or isopropylammonium p-toluenesulphonate.

Claim 10 (Previously Presented): A process for producing products from the composition according to claim 1, produced by melt processing, wherein the composition is melted in continuous compounders at melt temperatures of 105 to 220°C and residence times of 2 to 12 min and, with curing of the meltable melamine resin polycondensates, by customary processing methods for thermoplastic polymers,

A) is applied as a melt to a smoothing unit and taken off as sheet via conveyor belts and cut or are applied to and sealed on sheet webs comprising metal foils, polymeric films, paper webs or textile webs and are taken off as multi-component composites and finished,

or

B) is discharged through a profile die and taken off as profile or sheet material, cut and finished,

or

C) is discharged through an annular die, taken off as pipe, with injection of air, cut and finished,

or

D) following the introduction of blowing agents, is discharged through a slot die and taken off as foamed sheet material,

or

E) is discharged through the slot die of a pipe sheathing unit and applied in liquid melt form to, and sealed on, the rotating pipe,

or

F) in injection moulding machines, preferably with three-section screws with a screw length of 18 to 24 D, at high injection rates and at mould temperatures of 5 to 70°C, is processed to injection mouldings,

or

G) in melt spinning units is extruded by means of the melt pump through the capillary die into the blowing shaft and taken off as filaments or separated off by the melt-

blown process as fibres, or discharged as a melt by the rotational spinning process into a shear field chamber using organic dispersants, to form fibrils, and processed further in downstream installations,

or

H) is metered by the resin infusion process into an open mould with the semi-finished fibre product and shaped to laminates by the vacuum bag technology,

or

I) is injected by the resin injection process into a lockable mould in which there are preforms of textile material, and are shaped to components and cured,

or

K) is used for the melt impregnation of component blanks produced by the filament winding process, braiding process or pultrusion process,

and for full curing where appropriate the products are subjected to a thermal aftertreatment at temperatures of 180 to 220°C and residence times of 30 to 120 min.

Claim 11 (Cancelled).

Claim 12 (Previously Presented): A process for producing products from the composition according to claim 3, produced by melt processing, wherein the composition is melted in continuous compounders at melt temperatures of 105 to 220°C and residence times of 2 to 12 min and, with curing of the meltable melamine resin polycondensates, by customary processing methods for thermoplastic polymers,

A) is applied as a melt to a smoothing unit and taken off as sheet via conveyor belts and cut or are applied to and sealed on sheet webs comprising metal foils, polymeric films, paper webs or textile webs and are taken off as multi-component composites and finished,

or

B) is discharged through a profile die and taken off as profile or sheet material, cut and finished,

or

- C) is discharged through an annular die, taken off as pipe, with injection of air, cut and finished,
 - or
- D) following the introduction of blowing agents, is discharged through a slot die and taken off as foamed sheet material,
 - or
- E) is discharged through the slot die of a pipe sheathing unit and applied in liquid melt form to, and sealed on, the rotating pipe,
 - or
- F) in injection moulding machines, preferably with three-section screws with a screw length of 18 to 24 D, at high injection rates and at mould temperatures of 5 to 70°C, is processed to injection mouldings,
 - or
- G) in melt spinning units is extruded by means of the melt pump through the capillary die into the blowing shaft and taken off as filaments or separated off by the melt-blown process as fibres, or discharged as a melt by the rotational spinning process into a shear field chamber using organic dispersants, to form fibrils, and processed further in downstream installations,
 - or
- H) is metered by the resin infusion process into an open mould with the semi-finished fibre product and shaped to laminates by the vacuum bag technology,
 - or
- I) is injected by the resin injection process into a lockable mould in which there are preforms of textile material, and are shaped to components and cured,
 - or
- K) is used for the melt impregnation of component blanks produced by the filament winding process, braiding process or pultrusion process,
 - and for full curing where appropriate the products are subjected to a thermal aftertreatment at temperatures of 180 to 220°C and residence times of 30 to 120 min.

Claim 13 (Previously Presented): A process for producing products from the composition according to claim 4, produced by melt processing, wherein the composition is melted in continuous compounders at melt temperatures of 105 to 220°C and residence times of 2 to 12 min and, with curing of the meltable melamine resin polycondensates, by customary processing methods for thermoplastic polymers,

- A) is applied as a melt to a smoothing unit and taken off as sheet via conveyor belts and cut or are applied to and sealed on sheet webs comprising metal foils, polymeric films, paper webs or textile webs and are taken off as multi-component composites and finished,
 - or
- B) is discharged through a profile die and taken off as profile or sheet material, cut and finished,
 - or
- C) is discharged through an annular die, taken off as pipe, with injection of air, cut and finished,
 - or
- D) following the introduction of blowing agents, is discharged through a slot die and taken off as foamed sheet material,
 - or
- E) is discharged through the slot die of a pipe sheathing unit and applied in liquid melt form to, and sealed on, the rotating pipe,
 - or
- F) in injection moulding machines, preferably with three-section screws with a screw length of 18 to 24 D, at high injection rates and at mould temperatures of 5 to 70°C, is processed to injection mouldings,
 - or
- G) in melt spinning units is extruded by means of the melt pump through the capillary die into the blowing shaft and taken off as filaments or separated off by the melt-blown process as fibres, or discharged as a melt by the rotational spinning process into a shear field chamber using organic dispersants, to form fibrils, and processed further in downstream installations,

or

H) is metered by the resin infusion process into an open mould with the semi-finished fibre product and shaped to laminates by the vacuum bag technology,

or

I) is injected by the resin injection process into a lockable mould in which there are preforms of textile material, and are shaped to components and cured,

or

K) is used for the melt impregnation of component blanks produced by the filament winding process, braiding process or pultrusion process,

and for full curing where appropriate the products are subjected to a thermal aftertreatment at temperatures of 180 to 220°C and residence times of 30 to 120 min.

Claim 14 (Previously Presented): A process for producing products from the composition according to claim 5, produced by melt processing, wherein the composition is melted in continuous compounders at melt temperatures of 105 to 220°C and residence times of 2 to 12 min and, with curing of the meltable melamine resin polycondensates, by customary processing methods for thermoplastic polymers,

A) is applied as a melt to a smoothing unit and taken off as sheet via conveyor belts and cut or are applied to and sealed on sheet webs comprising metal foils, polymeric films, paper webs or textile webs and are taken off as multi-component composites and finished,

or

B) is discharged through a profile die and taken off as profile or sheet material, cut and finished,

or

C) is discharged through an annular die, taken off as pipe, with injection of air, cut and finished,

or

D) following the introduction of blowing agents, is discharged through a slot die and taken off as foamed sheet material,

or

- E) is discharged through the slot die of a pipe sheathing unit and applied in liquid melt form to, and sealed on, the rotating pipe,
 - or
- F) in injection moulding machines, preferably with three-section screws with a screw length of 18 to 24 D, at high injection rates and at mould temperatures of 5 to 70°C, is processed to injection mouldings,
 - or
- G) in melt spinning units is extruded by means of the melt pump through the capillary die into the blowing shaft and taken off as filaments or separated off by the melt-blown process as fibres, or discharged as a melt by the rotational spinning process into a shear field chamber using organic dispersants, to form fibrils, and processed further in downstream installations,
 - or
- H) is metered by the resin infusion process into an open mould with the semi-finished fibre product and shaped to laminates by the vacuum bag technology,
 - or
- I) is injected by the resin injection process into a lockable mould in which there are preforms of textile material, and are shaped to components and cured,
 - or
- K) is used for the melt impregnation of component blanks produced by the filament winding process, braiding process or pultrusion process,
 - and for full curing where appropriate the products are subjected to a thermal aftertreatment at temperatures of 180 to 220°C and residence times of 30 to 120 min.

Claim 15 (Previously Presented): A process for producing products from the composition according to claim 6, produced by melt processing, wherein the composition is melted in continuous compounders at melt temperatures of 105 to 220°C and residence times of 2 to 12 min and, with curing of the meltable melamine resin polycondensates, by customary processing methods for thermoplastic polymers,

- A) is applied as a melt to a smoothing unit and taken off as sheet via conveyor belts and cut or are applied to and sealed on sheet webs comprising metal foils, polymeric

films, paper webs or textile webs and are taken off as multi-component composites and finished,

or

B) is discharged through a profile die and taken off as profile or sheet material, cut and finished,

or

C) is discharged through an annular die, taken off as pipe, with injection of air, cut and finished,

or

D) following the introduction of blowing agents, is discharged through a slot die and taken off as foamed sheet material,

or

E) is discharged through the slot die of a pipe sheathing unit and applied in liquid melt form to, and sealed on, the rotating pipe,

or

F) in injection moulding machines, preferably with three-section screws with a screw length of 18 to 24 D, at high injection rates and at mould temperatures of 5 to 70°C, is processed to injection mouldings,

or

G) in melt spinning units is extruded by means of the melt pump through the capillary die into the blowing shaft and taken off as filaments or separated off by the melt-blown process as fibres, or discharged as a melt by the rotational spinning process into a shear field chamber using organic dispersants, to form fibrils, and processed further in downstream installations,

or

H) is metered by the resin infusion process into an open mould with the semi-finished fibre product and shaped to laminates by the vacuum bag technology,

or

I) is injected by the resin injection process into a lockable mould in which there are preforms of textile material, and are shaped to components and cured,

or

K) is used for the melt impregnation of component blanks produced by the filament winding process, braiding process or pultrusion process,
and for full curing where appropriate the products are subjected to a thermal aftertreatment at temperatures of 180 to 220°C and residence times of 30 to 120 min.

Claim 16 (Previously Presented): A process for producing products from the composition according to claim 7, produced by melt processing, wherein the composition is melted in continuous compounders at melt temperatures of 105 to 220°C and residence times of 2 to 12 min and, with curing of the meltable melamine resin polycondensates, by customary processing methods for thermoplastic polymers,

A) is applied as a melt to a smoothing unit and taken off as sheet via conveyor belts and cut or are applied to and sealed on sheet webs comprising metal foils, polymeric films, paper webs or textile webs and are taken off as multi-component composites and finished,

or

B) is discharged through a profile die and taken off as profile or sheet material, cut and finished,

or

C) is discharged through an annular die, taken off as pipe, with injection of air, cut and finished,

or

D) following the introduction of blowing agents, is discharged through a slot die and taken off as foamed sheet material,

or

E) is discharged through the slot die of a pipe sheathing unit and applied in liquid melt form to, and sealed on, the rotating pipe,

or

F) in injection moulding machines, preferably with three-section screws with a screw length of 18 to 24 D, at high injection rates and at mould temperatures of 5 to 70°C, is processed to injection mouldings,

or

G) in melt spinning units is extruded by means of the melt pump through the capillary die into the blowing shaft and taken off as filaments or separated off by the melt-blown process as fibres, or discharged as a melt by the rotational spinning process into a shear field chamber using organic dispersants, to form fibrils, and processed further in downstream installations,

or

H) is metered by the resin infusion process into an open mould with the semi-finished fibre product and shaped to laminates by the vacuum bag technology,

or

I) is injected by the resin injection process into a lockable mould in which there are preforms of textile material, and are shaped to components and cured,

or

K) is used for the melt impregnation of component blanks produced by the filament winding process, braiding process or pultrusion process,

and for full curing where appropriate the products are subjected to a thermal aftertreatment at temperatures of 180 to 220°C and residence times of 30 to 120 min.

Claim 17 (Previously Presented): A process for producing products from the composition according to claim 8, produced by melt processing, wherein the composition is melted in continuous compounders at melt temperatures of 105 to 220°C and residence times of 2 to 12 min and, with curing of the meltable melamine resin polycondensates, by customary processing methods for thermoplastic polymers,

A) is applied as a melt to a smoothing unit and taken off as sheet via conveyor belts and cut or are applied to and sealed on sheet webs comprising metal foils, polymeric films, paper webs or textile webs and are taken off as multi-component composites and finished,

or

B) is discharged through a profile die and taken off as profile or sheet material, cut and finished,

or

- C) is discharged through an annular die, taken off as pipe, with injection of air, cut and finished,
 - or
- D) following the introduction of blowing agents, is discharged through a slot die and taken off as foamed sheet material,
 - or
- E) is discharged through the slot die of a pipe sheathing unit and applied in liquid melt form to, and sealed on, the rotating pipe,
 - or
- F) in injection moulding machines, preferably with three-section screws with a screw length of 18 to 24 D, at high injection rates and at mould temperatures of 5 to 70°C, is processed to injection mouldings,
 - or
- G) in melt spinning units is extruded by means of the melt pump through the capillary die into the blowing shaft and taken off as filaments or separated off by the melt-blown process as fibres, or discharged as a melt by the rotational spinning process into a shear field chamber using organic dispersants, to form fibrils, and processed further in downstream installations,
 - or
- H) is metered by the resin infusion process into an open mould with the semi-finished fibre product and shaped to laminates by the vacuum bag technology,
 - or
- I) is injected by the resin injection process into a lockable mould in which there are preforms of textile material, and are shaped to components and cured,
 - or
- K) is used for the melt impregnation of component blanks produced by the filament winding process, braiding process or pultrusion process,
 - and for full curing where appropriate the products are subjected to a thermal aftertreatment at temperatures of 180 to 220°C and residence times of 30 to 120 min.

Claim 18 (Previously Presented): A process for producing products from the composition according to claim 9, produced by melt processing, wherein the composition is melted in continuous compounders at melt temperatures of 105 to 220°C and residence times of 2 to 12 min and, with curing of the meltable melamine resin polycondensates, by customary processing methods for thermoplastic polymers,

- A) is applied as a melt to a smoothing unit and taken off as sheet via conveyor belts and cut or are applied to and sealed on sheet webs comprising metal foils, polymeric films, paper webs or textile webs and are taken off as multi-component composites and finished,
 - or
- B) is discharged through a profile die and taken off as profile or sheet material, cut and finished,
 - or
- C) is discharged through an annular die, taken off as pipe, with injection of air, cut and finished,
 - or
- D) following the introduction of blowing agents, is discharged through a slot die and taken off as foamed sheet material,
 - or
- E) is discharged through the slot die of a pipe sheathing unit and applied in liquid melt form to, and sealed on, the rotating pipe,
 - or
- F) in injection moulding machines, preferably with three-section screws with a screw length of 18 to 24 D, at high injection rates and at mould temperatures of 5 to 70°C, is processed to injection mouldings,
 - or
- G) in melt spinning units is extruded by means of the melt pump through the capillary die into the blowing shaft and taken off as filaments or separated off by the melt-blown process as fibres, or discharged as a melt by the rotational spinning process into a shear field chamber using organic dispersants, to form fibrils, and processed further in downstream installations,

or

H) is metered by the resin infusion process into an open mould with the semi-finished fibre product and shaped to laminates by the vacuum bag technology,

or

I) is injected by the resin injection process into a lockable mould in which there are preforms of textile material, and are shaped to components and cured,

or

K) is used for the melt impregnation of component blanks produced by the filament winding process, braiding process or pultrusion process,

and for full curing where appropriate the products are subjected to a thermal aftertreatment at temperatures of 180 to 220°C and residence times of 30 to 120 min.